We claim:

1. A method for determination of the length of objects in traffic, especially passenger cars, trucks, buses, motorbikes, bicycles and pedestrians, comprising the steps of:
   - emitting radar signals from a vehicle which are reflected by an object which is to be measured,
   - receiving the reflected radar signals in the vehicle,
   - evaluating the frequency spectra of the reflected radar signals, and
   - determining the reflection peaks contained in the frequency spectra,
   - determining the width of the reflection peaks, and
   - determining the length of the object by means of the determined width.

2. The method according to Claim 1, wherein from the vehicle a radar chirp is emitted in a continuous wave radar or a pulse is emitted in a pulse radar measurement method or a frequency shift keying (FSK) transmission signal is emitted as a radar transmission signal.

3. The method according to Claim 1, wherein the length of the object is determined from the range resolution ΔR of the radar chirp and the width of the reflection peaks $\Delta\kappa$ essentially according to the formula $L = \Delta R \cdot \Delta\kappa$.

4. The method according to Claim 1, wherein the width of the reflection peaks is determined at a specified amplitude.

5. The method according to Claim 1, wherein in a CW radar the frequency spectra of the reflected radar signals are determined by Fast Fourier Transformation, or in a pulse radar the number of range gates, whose reception power are above the decision threshold are measured.

6. The method according to Claim 1, wherein the radar signals are generated by means of linear frequency modulated continuous wave radar sensors and/or pulse radar sensors and/or FSK-modulated sensors.

7. The method according to Claim 1, wherein the weight of the object is estimated, at least by means of the determined length of the object.

8. The method according to Claim 7, wherein the determined weight of the object is made available to driver assistance systems.

9. The method according to Claim 7, wherein by means of the determined weight or length of the object, interventions in the driving dynamics or protection devices, especially occupant protection devices or pedestrian protection devices, are controlled.

10. The method according to Claim 7, wherein an estimated collision severity is determined by means of the determined weight of the object.

11. The method according to Claim 1, wherein an object contour of the object is determined with an image processing camera system and/or a contour-measuring laser sensor.

12. The method according to Claim 11, wherein the determined object contours are used to refine, adjust and/or verify additional vehicle data and/or for interpretation of the traffic scene closer to reality.

13. A device for determination of the length of an object in traffic, comprising:
- a radar sensor that transmits and receives radar signals,
- a frequency analysis device that determines a frequency spectrum of the received radar signals,
- a detection device that determines reflection peaks contained in the frequency spectrum, wherein the detection device is designed to determine the width of the reflection peaks, and
- a length calculation device that calculates the length of the object being measured, partly from the width of the reflection peaks.

14. The device according to Claim 13, wherein the radar sensor is designed to emit a radar chirp in a continuous wave radar or a pulse in a pulse radar measurement method or a frequency shift keying (FSK) transmission signal as a radar transmission signal.

15. The device according to Claim 13, wherein the length calculation device determines the length of the object from the range resolution ΔR of the radar chirp and the width of the reflection peaks $\Delta\kappa$ essentially according to the formula $L = \Delta R \cdot \Delta\kappa$.

16. The device according to Claim 13, wherein the radar sensor is a CW radar and the frequency analysis device operates with a Fast Fourier Transformation.

17. The device according to Claim 13, wherein the radar sensor is a pulse radar.

18. The device according to Claim 13, wherein the radar signals are generated by means of linear frequency modulated continuous wave radar sensors and/or pulse radar sensors and/or FSK-modulated sensors.

19. The device according to Claim 13, wherein the weight of the object is estimated, at least by means of the determined length of the object.

20. The device according to Claim 19, wherein the determined weight of the object is made available to driver assistance systems.

21. The device according to Claim 19, further comprising means to control interventions in the driving dynamics or protection devices, especially occupant protection devices or pedestrian protection devices by means of the determined weight or length of the object.

22. The device according to Claim 19, further comprising means for determining an estimated collision severity by means of the determined weight of the object.

23. The device according to Claim 13, further comprising an image processing camera system and/or a contour-measuring laser sensor to determine an object contour.